

Application Serial No. 10/734,008  
Amendment dated September 4, 2007  
Reply to Office Action of April 2, 2007

Atty Dkt No. HSJ92003218US1  
Mintz Dkt No. 4800-0009

# EXHIBIT A

USSN 10/734,008

# Ethyl lactate

From Wikipedia, the free encyclopedia

**Ethyl lactate**, also known as lactic acid ethyl ester, is a monobasic ester formed from lactic acid and ethanol, commonly used as a solvent. This compound is considered biodegradable and can be used as a water-rinsable degreaser. Ethyl lactate is found naturally in small quantities in a wide variety of foods including wine, chicken, and various fruits. The odor of ethyl lactate is mild, buttery, creamy, with hints of fruit and coconut.

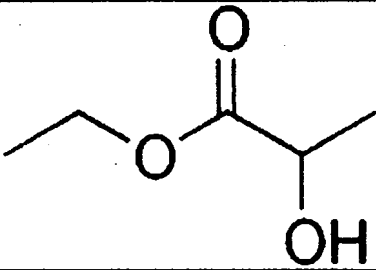
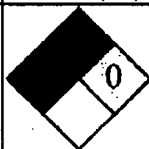
Due to its relatively low toxicity, ethyl lactate is used commonly in pharmaceutical preparations, food additives, and fragrances. Also used as solvent for nitrocellulose, cellulose acetate, and cellulose ethers.

## External links

- Links to external chemical sources

Retrieved from  
"http://en.wikipedia.org/wiki/Ethyl\_lactate"

Categories: Solvents | Carboxylate esters | Alcohols

Ethyl lactate	
	
General	
Systematic name	Ethyl 2-hydroxypropanoate
Other names	Ethyl lactate Lactic acid ethyl ester 2-Hydroxypropanoic acid ethyl ester Actylol Acytol
Molecular formula	C <sub>5</sub> H <sub>10</sub> O <sub>3</sub>
SMILES	O=C(OCC)C(O)C
Molar mass	118.13 g/mol
Appearance	Clear to slightly yellow liquid
CAS number	[97-64-3], [687-47-8] (L-form)
Properties	
Density and phase	1.03g/cm <sup>3</sup> , liquid
Solubility in water	Miscible
Solubility in ethanol, and most alcohols	Miscible
Melting point	−26 °C
Boiling point	151-155 °C
Hazards	
MSDS	External MSDS
Main hazards	Irritant (Xi)
NFPA 704	
R-phrases	R10, R37, R41
S-phrases	(S2), S24, S26, S39
Flash point	46 °C
RTECS number	OD5075000
Related compounds	
Related compounds	Lactic acid
Except where noted otherwise, data are given for materials in their standard state (at 25 °C, 100 kPa)	

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# EXHIBIT B

USSN 10/734,008

4133809v.1

# Cyclohexanone

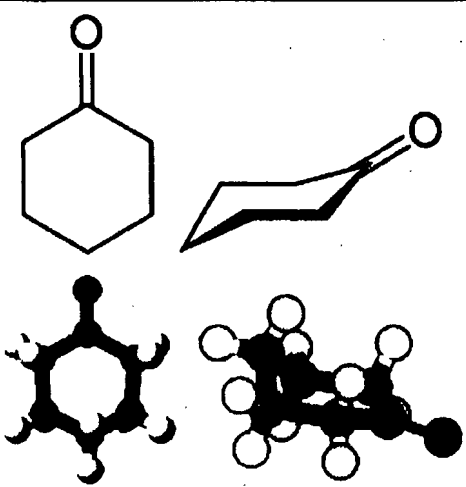
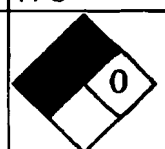
From Wikipedia, the free encyclopedia

**Cyclohexanone** (also known as oxocyclohexane, pimelic ketone, ketohexamethylene, cyclohexyl ketone or ketocyclohexane) is a six-carbon cyclic molecule with a ketone functional group. It is a colorless, oily liquid with an acetone-like smell. Over time, the color of the liquid changes to yellow. Cyclohexanone is slightly soluble in water (5-10 g/100 ml), but miscible with the most common organic solvents.

Cyclohexanone is employed as an industrial solvent and as activator in oxidation reactions. It is also used in the production of adipic acid, cyclohexanone resins, caprolactam and nylon 6.

## External links

- International Chemical Safety Card 0425

Cyclohexanone	
	
General	
Molecular formula	$C_6H_{10}O$
SMILES	<chem>C1CCCCC1=O</chem>
Molar mass	$98.15\text{ g mol}^{-1}$
Appearance	Colorless, liquid
CAS number	[108-94-1]
Properties	
Density and phase	$0.9478\text{ g/ml}$ , liquid
Solubility in water	Miscible
Solubility in ethanol	Miscible
Melting point	$-16.4\text{ }^{\circ}\text{C}$
Boiling point	$155.65\text{ }^{\circ}\text{C}$
Viscosity	$0.898\text{ cP}$ at $25\text{ }^{\circ}\text{C}$
Thermodynamic data	
Standard enthalpy of formation $\Delta_f H^{\circ}_{\text{liquid}}$	$-270.7\text{ kJ mol}^{-1}$
Standard enthalpy of combustion $\Delta_c H^{\circ}_{\text{liquid}}$	$-3519.3\text{ kJ/mol}^{-1}$
Standard molar entropy $S^{\circ}_{\text{liquid}}$	$+229.03\text{ J.K}^{-1}.\text{mol}^{-1}$
Hazards	
EU classification	Harmful (Xn)
Flash Point	44 C
NFPA 704	

R-phrases	R10, R20
S-phrases	(S2), S25
<b>Supplementary data page</b>	
Structure and properties	$n_D^{20}$ : 1.4503, $\epsilon$ , etc.
Thermodynamic data	Phase behaviour Solid, liquid, gas
Spectral data	UV, IR, NMR, MS
Regulatory data	Flash point, RTECS number, etc.
<b>Related compounds</b>	
Related ketones	Cyclopentanone
Related compounds	Cyclohexanol
Except where noted otherwise, data are given for materials in their standard state (at 25 °C, 100 kPa)	
Infobox disclaimer and references	

- ([http://www.ilo.org/public/english/protection/safework/cis/products/icsc/dtasht/\\_icsc04/icsc0425.h](http://www.ilo.org/public/english/protection/safework/cis/products/icsc/dtasht/_icsc04/icsc0425.h))
- NIOSH Pocket Guide to Chemical Hazards (<http://www.cdc.gov/niosh/npg/npgd0166.html>)
  - IARC Monograph "Cyclohexanone" (<http://www-cie.iarc.fr/htdocs/monographs/vol47/47-04.htm>)

- Links to external chemical sources

Retrieved from "<http://en.wikipedia.org/wiki/Cyclohexanone>"

Categories: Ketones | IARC Group 3 carcinogens | Organic compound stubs

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